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*Published in:*
Clinical Epidemiology

*DOI (link to publication from Publisher):*
10.2147/CLEP.S222994



*Publication date:*
2019

*Document Version*
Publisher's PDF, also known as Version of record

Clinical Epidemiology

Dovepress
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Open Access Full Text Article

RESPONSE TO LETTER

# Extent of coronary artery disease is associated with myocardial infarction and mortality in patients with diabetes mellitus [Response to Letter]

This article was published in the following Dove Press journal:
*Clinical Epidemiology*

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## Dear editor

We thank Xu et al for their interest in our study.[1] First, we unfortunately did not have access to LDL measurements which we acknowledge potentially could have provided valuable information. We found that statin treatment increased with the extent of coronary artery disease (CAD) which may lead to underestimation of the actual effect of CAD extent.

Second, our dataset did not include information on HbA1c. The association between hyperglycemia and cardiovascular risk is complex.[2] Furthermore, glycemic levels are not part of cardiovascular risk assessment in patients with diabetes since HbA1c does not sufficiently represent the diabetes-related cardiovascular disease severity.[2]

Third, we agree that the location and number of coronary lesions are important indicators of atherosclerotic disease burden at the individual patient level. However, at a cohort level CAD extent was strongly associated with adverse cardiovascular events in diabetes patients. Furthermore, our study aligns with previous results that demonstrated a clear association between the CAD extent and cardiovascular risk in patients with diabetes after coronary angiography.[3]

Fourth, we did not perform analysis stratified by sex. However, we included sex as a variable in the multivariate regression analyses in the study, thus adjusting for the potential effect of sex. We found that sex was not strongly associated with risk of major adverse cardiovascular events (MACE) in angiography patients. Women only had a slightly lower risk of MACE compared to men (adjusted incidence rate ratio 0.93, 95% CI 0.83–1.04) when accounting for additional confounders including CAD extent.

Fifth, we agree that poly-drug usage may result in lower compliance. However, nothing in our data indicates low drug compliance. Our data rather show that compliance to anti-thrombotic treatment and statins was high in patients with CAD. While we cannot account for actual drug ingestion in a registry setting, drug treatment results were based on prescription dispensations. The patients would have had to actively redeem and pay for their prescriptions at a pharmacy which strongly indicates drug compliance. Furthermore, drug treatment was high in all patients with either 1-, 2-, or 3-vessel obstructive CAD. Any potential lack of drug compliance due to poly-drug use would presumably be similar among these patients and, thus, cannot account for the association between cardiovascular risk and CAD extent.

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DovePress
http://doi.org/10.2147/CLEP.S222994

## Disclosure

The authors report no conflicts of interest in this communication.

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